From: "Louie,Peter W" <plouie@mwd.dst.ca.us>
To: "'Ron Ott'" <ronott@water.ca.gov>, fishteam@water.ca.gov, prhoads@mwd.dst.ca.us, vgorre@ewri.com, bobker@bay.org, acfowler@scvwd.dst.ca.us, ckoehler@econet.org, jmaher@scvwd.dst.ca.us, vgorre@ewri.com, NoName@water.ca.gov, hydrobro@ix.netcom.com
Subject: RE: DNCT/Modeling Minutes 3/2/99
Date: Wed, 3 Mar 1999 16:56:17 -0800
X-Mailer: Internet Mail Service (5.5.2232.9)

DNCT-Modeling
Meeting Notes
3/2/99
9:30am - 12:30pm
Attendees: George Barnes, Pete Chadwick, David Forkel, Paul Fujitani, Dave Fullerton, Bruce Herbold, Arthur Hinojosa, Peter Louie, BJ Miller, Earl Nelson, Spreck Rosekrans, and Jim Snow.

Agenda:

* Contracts/Accounting-pros and cons
* Contracts for EI water
* Gaming tools available by March
* Money and Power
* Thursday meeting
* COA paper

On contracts/accounting:
Contracts Approach
Dave Fullerton-

1. Either approach may need sophisticated rules.
2. With contracts, we may draw correlation between the amount of water (from JPOD, relax E/I, etc.) to certain hydrologic factors (e.g., storage level, amount of inflow, etc.) to determine the amount of water to get into the EWA.
3. Based on non-manipulative (by project operations) hydrologic parameters.
4. With the contracts, we can get out of priorities on conveyance/storage capacity.
5. Even with contracts, there will be some accounting on all aspects of the EWA (the degree of details may be reduced).

Jim Snow-

6. We may want to tie the amount that the EWA gets to what the contractors get in percentage terms.

Strict Accounting Approach
Dave Fullerton-

7. Strict accounting is more difficult because of frequent changes to

project operations.
8. It requires establishment of a baseline (a dynamic baseline). For instance, if exports get curtailed, water users may use JPOD to compensate for the loss, but then the EWA gets a share of the increase use of JPOD.
9. Trying to account for every change in project operations and what it would have been without the change (baseline) could be unwieldy.

Dave Forkel-

10. Strict accounting may not be as difficult as we think. We should get started and see what can be done with accounting and what needs to be handled using the contracts approach.

Group consensus-

11. We may end up with using both approaches.

Horse-Trading Approach

Bruce Herbold and Dave Fullerton-

12. Effectively, this would be setting new regulations to change project operations.
13. Use it or lose it.

General Item

Dave Fullerton-

14. As water demands go up, may need adjustments to how much the EWA gets to account for the increased utility of the facilities.

On Contracts for EI Water:

Bruce Herbold-

15. Upon looking at the DWRSIM results (from George Barnes' staff) of the cases with and without E/I ratios, Bruce questioned why there were higher gains in SWP/CVP deliveries in June/July as opposed to March/April? The months might be mislabeled on the model result summary.

Jim Snow-

16. The storage numbers looked strange also.

Bruce Herbold-

17. On annual basis, of the 73 hydrologic traces, the SWP/CVP deliveries ranged from a gain of 530 taf to a loss of 160 taf, with an average of 122 taf net gain when E/I ratios were removed. This may suggest that the EWA may get a contractual amount of 100 taf as a round number.
18. Correlation analyses were conducted with delivery gains to other hydrologic parameters such as San Luis, Shasta and Oroville storages in October, February X2, June X2, X2 range (Feb-Jun difference), Eight River Index and Four River Index. Results did not show any significant correlation between deliveries and the aforesaid variables.
19. When multi-year averages were computed, it was noted that with 3-year averaging, much of the negative impacts on deliveries disappeared.
20. Some improvement on the correlation coefficients when multiple-year averages were used, but still there did not seem to be any relationship between increased deliveries and other parameters.

D-055582

BJ Miller-

21. If 3-year time frame shows no negative impacts on project deliveries, than one possible contract quantity for the EWA would be 360 taf in three years.

22. Based on Bruce's statistical work, the notion that Dave advanced in items 2 & 3 above does not appear to work.

Dave Fullerton-

23. Annual operations of the EWA may have negative impacts at times, we need to know if water users can handle these setbacks.

24. Not convinced that there are no correlation to be drawn between the quantities gained from flexing E/I ratios and some hydrologic parameters for sizing the contracts. Try some lag1, lag2 terms.

Peter Louie-

25. If using months when EI ratios are tight, instead of all months in a year (or annual data), there may be greater correlation between delivery gains and, say Eight River Index or some other hydrologic parameters.

26. The 122 taf gained from removing EI ratios were derived from case runs that involved b2 actions. Results from two other runs from George Barnes' staff that removing E/I ratios without b2 actions indicate a gain of only 77 taf. The increased gain may be attributable to the increased storage space due to b2 actions to allow capture the water from the removal of E/I ratios.

BJ Miller-

27. Looking at these results, these are small quantities--no leaps and bounds from these approaches.

Bruce Herbold-

28. On average, it may not be much; on some years, particularly dry years, it could be meaningful.

Dave Fullerton-

29. If we add JPOD, storage, bigger Banks, etc. on top of flexing EI ratios, then the quantity of water is much greater.

Gaming Tools:

BJ Miller-

30. Laid out the components of the gaming tool and the process flow diagram.

Water supply facility improvements & optional components of EWA

Groundwater storage 1,2,3

Surface water storage (SOD) 1,2,3

In-Delta storage

Upstream storage

Purchase options

Flex E/I, others
Purchase efficiency

(transfers)

Accounting/Contracts
Biologic uses (rules)
Real-time and prescriptive

Bruce Herbold--> Biologic Response (actions taken to reduce salvage may have effects on salvage of subsequent months or years).

Pete Chadwick-->Benefits and Impacts
Water Supply
Fishery/Environment
Water Quality

BJ Miller--> Process Flowchart:

Pete Chadwick-

31. Gaming tool does not exist.

George Barnes-

32. A tool for gaming purposes may be available in April or May.

Bruce Herbold-

33. We need one this month (March).

Peter Louie-

34. We can use what Russ Brown and Peter Louie have done with the fish triggers and in-Delta operations and link them with the operators forecasting models that involve the entire system operations for the gaming exercise.

Spreck Rosekrans-

35. We need to automate the gaming process to handle a number of components.

36. Need to run a case without EWA-controlled storage.
Dave Fullerton-
37. The more we can use prescriptive rules, the less gaming we need to do because the model can handle the prescriptive rules.

Assignments
38. A list of WS/EWA facilities and operational rules (DF, BW & GB)
39. Bio rules (BH and others)
Prescriptive rules
Flex rules to produce EWA water
Bio response
40. Gaming tool (PL, JS, PF, RB, GB, BH)

Paul Fujitani passed out a paper on "COA Accounting for SWP and CVP."

Jim Snow and Art Hinojosa passed out a page on "Cost Considerations for Conveyance along the SWP."
The cost of power depends on market value and varies with time of year and time of day.

Thursday's DNCT-at large meeting (3/4/99) will be merged with the meeting with Quinn/Spears. Members of DNCT may check with their respective bosses for appropriateness in attending that combined meeting.